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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,484	12/06/2001	Shuji Arakawa	VX012358 PCT	4422

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EXAMINER

PEREZ, JULIO R

ART UNIT	PAPER NUMBER
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2681

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/936,484

Applicant(s)

ARAKAWA ET AL.

Examiner

Julio R Perez

Art Unit

2681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27 and 28 is/are allowed.
- 6) ☒ Claim(s) 15-17, 20, 22-26, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) 18, 19, 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ali et al. (5588005).

Regarding 15, Ali et al. disclose a communication device of a construction machine for communicating between the construction machine and a terminal device, characterized in that: a communication device, which enables communications with said terminal device when an electrical connection to a power source is ON, and location detecting means for detecting a location of said construction machine are provided in said construction machine (col. 3, lines 51-64; col. 4, lines 1-8 and 22-24, mobile units are incorporated into the system to communicate with a remote station and providing the location of the mobile units via the GPS).

Ali et al. do not explicitly disclose means for turning ON an electrical connection between said power source and said communication device when an engine of said construction machine is stopped, is provided in said construction machine; and a time at which the electrical connection between said power source and said communication device is turned ON is changed in accordance with the location of said construction machine detected by said location detecting means.

However, the preceding limitation is known in the art of telecommunications.

Ali et al. strongly suggest the use of reduction of power to provide reliability with the use of a battery backup, which is charged by solar cells, corresponding to having the communication device on all the time (col. 5, lines 18-32). Furthermore, the system provides means with precise time information thorough the GPS leading to a change of time periods during movement from location to location (col. 4, lines 9-21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to improve the system as taught by Ali et al. by implementing the system with a switchable device in order to continuously power up the mobile unit while the vehicle power is OFF.

3. Claims 16, 29, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ali et al. (5588005).

Regarding claim 16, Ali et al. disclose a communication device of a construction machine for communicating between the construction machine and a terminal device, characterized in that: a communication device, which enables communications with said terminal device when an electrical connection to a power source is ON and travel speed computing means for computing a travel speed of said construction machine are provided in said construction machine (col. 3, lines 66-67; col. 4, lines 1-8, the mobile unit communicates with the remote station, and velocity and precise time information are provided by the

GPS); and a time at which the electrical connection between said power source and said communication device is turned ON is changed in accordance with the travel speed of said construction machine computed by said travel speed computing means (col. 4, lines 1-21, time is changing as the speed of the tracking system is changing).

Ali et al. do not explicitly disclose means for turning ON the electrical connection between said power source and said communication device when an engine of said construction machine is stopped, is provided in said construction machine.

However, the preceding limitation is known in the art of telecommunications.

Ali et al. strongly suggest the use of reduction of power to provide reliability with the use of a battery backup, which is charged by solar cells, corresponding to having the communication device on all the time (col. 5, lines 18-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to improve the system as taught by Ali et al. by implementing the system with a switchable device in order to continuously power up the mobile unit while the vehicle power is OFF.

Regarding 29, Ali et al. disclose a communication device of a mobile unit for communicating between a mobile unit and a terminal device via a communication satellite, characterized in that: a communication device, which

enables communications with said terminal device when an electrical connection to a power source is ON and clocking means for clocking timing are provided in said mobile unit (col. 3, lines 51-67; col. 4, lines 22-63).

Ali et al. do not explicitly disclose means for turning ON the electrical connection between said power source and said communication device each time the timing clocked by said clocking means and a flight timing of said communication satellite coincide when an engine of said mobile unit is stopped, is provided in said mobile unit.

However, the preceding limitation is known in the art of telecommunications.

Ali et al. strongly suggest the use of reduction of power to provide reliability with the use of a battery backup, which is charged by solar cells, corresponding to having the communication device on all the time (col. 5, lines 18-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to improve the system as taught by Ali et al. by implementing the system with a switchable device in order to continuously power up the mobile unit while the vehicle power is OFF.

Regarding 30, Ali et al. disclose a communication device of a mobile unit for communicating between a mobile unit and a terminal device, characterized in that: a communication device enabling communications with said terminal device when an electrical connection to a power source is turned ON is provided in said mobile unit (col. 3, lines 51-64;

col. 4, lines 1-8 and 22-24, mobile units are incorporated into the system to communicate with a remote station and providing the location of the mobile units via the GPS).

Ali et al. do not explicitly disclose means for turning ON at a predetermined period the electrical connection between said power source and said communication device when an engine of said operational mobile unit is stopped, is provided in said mobile unit, and said period is changed in accordance with change data sent to said mobile unit from said terminal device.

However, the preceding limitation is known in the art of telecommunications.

Ali et al. strongly suggest the use of reduction of power to provide reliability with the use of a battery backup, which is charged by solar cells, corresponding to having the communication device on all the time (col. 5, lines 18-32).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 17, 20, 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by applicant's submission of prior art Ali et al. (5588005).

Regarding 17, Ali et al. disclose a communication device of a mobile unit constituted such that the mobile unit and a terminal device are connected by

communication means enabling mutual transmission and reception, and, in accordance with an input operation performed at said terminal device of requesting mobile unit information related to the mobile unit, a content of a request is sent to the mobile unit, and the mobile unit, which receives the request content, acquires, via a mobile unit, mobile unit information corresponding to the request content and sends the acquired mobile unit information to said terminal device (col. 3, lines 51-67; col. 4, lines 1-21, the system comprises a transceiver in the mobile unit to communicate with a remote station), characterized in that: detecting means for detecting a specified parameter in the mobile unit is provided in said mobile unit (col. 5, lines 33-50, the tracking unit provides means to acquire information on several parameters including status of available power); and when said detecting mean detects that the specified parameter has attained a specified value, specified mobile unit information is sent to said terminal device from said mobile unit (col. 6, lines 1-17; col. 7, lines 1-13, the tracking unit in communication with the remote station may provide specific information on parameters as required by the remote station).

Regarding 20, Ali et al. disclose the communication device of a mobile unit, characterized in that said detecting means is detecting means for detecting a location of said mobile unit, and when the location of said mobile unit changes, the specified mobile unit information is sent to said terminal device from said mobile unit (col. 3, lines 64-67; col. 4, lines 1-8; col. 5, lines 5, 45-50, the tracking unit is in communication with the remote station and occasionally sending the changes of its location to the remote station).

Regarding 22, Ali et al. disclose the communication device of a mobile unit, characterized in that said detecting means is detecting means for detecting a drop in voltage of a power source mounted to said mobile unit, and when the voltage of said power source drop below a specified value, the specified mobile unit information is sent to said terminal device from said mobile unit (col. 5, lines 39-50; col. 7, lines 3-13, the tracking units has means to report the status of its various parameters including battery power levels).

Regarding 23, Ali et al. disclose the communication device of a mobile unit, characterized in that the specified mobile unit information is sent to said terminal device from said mobile unit only when a content of mobile unit-related data to be sent this time differs from a content of mobile unit-related data sent a previous time (col. 7, lines 119, the tracking unit is constantly transmitting parameter status to the central station in conformity to the changing in parameter status).

Regarding 24, Ali et al. disclose the communication device of a mobile unit, characterized in that, by sending change data to said mobile unit from said terminal device, this change data is received by said mobile unit, and said mobile unit changes either a specified parameter in the mobile unit or a specified value of said parameter in accordance with the received change data (col. 51-66, the remote terminal is handled by operators, who may execute commands to control the mobile unit parameters).

Regarding 25, Ali et al. disclose a communication device of an operational mobile unit for communicating between a plurality of operational mobile units and a terminal device, characterized in that: one or more business offices at/ from which said plurality of operational mobile units are stored/ dispatched, and one or more work sites

at which said plurality of operational mobile units are operated, are established (col. 3, lines 51-67; col. 4, lines 1-8, tracking units are stored at the cargo-carrying conveyances where can communicate with the remote terminal); location detecting means for detecting a location of said operational mobile unit is provided in each operational mobile unit (col. 4, lines 1-8, the GPS device provides location status of the operational units); based on the detection result of said location detecting means and location data for said business office and work site, when said operational mobile unit enters said business office or work site, data stating that this operational mobile unit has entered this business office or work site is sent to said terminal device from this operational mobile unit, and when said operational mobile unit exits from said business office or work site, data stating that this operational mobile unit has exited this business office or work site is sent to said terminal device from this operational mobile unit (col. 3, lines 51-67; col. 4, lines 1-21 and 64-67; col. 5, lines 1-17; the communication between the mobile units and the remote station via satellite permits the system provide information regarding the position and whereabouts of mobile units); and based on said sent data, data on the entry/ exit of said plurality of operational mobile units to/from said business offices or work sites is managed by said terminal device (col. 3, lines 51-67; col. 4, lines 1-21 and 64-67; col. 5, lines 1-17, data sent to the remote station provides information the mobile unites as managed by the remote station).

Regarding claim 26, Ali et al. disclose the communication device of an operational mobile unit, characterized in that, when said operational mobile unit exits from said business office or work site, location data is sent to said terminal device from

said operational mobile unit each time said operational mobile unit moves a predetermined distance, and, based on said sent location data, data on a movement history of said operational mobile unit is managed by said terminal device (col. 3, lines 51-67; col. 4, lines 1-21, the remote station manages and monitors the movement of the mobile tracking units during their trajectory) .

Allowable Subject Matter

6. Claims 18, 19, 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The prior art fails to teach detecting means when an engine of said mobile unit has been started, totaling engine operating hours and detecting a relative location of the mobile in relation to a set range.

7. Claims 27, 28 are allowed.

Prior art has not been found that suggests or renders obvious the limitation of independent claims 27 and 28 disclosing instructions to a transportation mobile unit to carry the operational mobile unit from the operating area to the storage and dispatch area.

Conclusion


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the art with respect to communication devices and location device providers.

US Pat. No. 5068656 to Sutherland	Monitoring and reporting out-of-range mileage for long haul trucks
US pat. No. 5025253 to DiLullo et al.	System and method for remotely monitoring
US Pat. No. 5913170 to Wortham	Locating system and method for mobile communications
US Pat. No. 5726450 to Peterson et al.	Remote emissions sensor for motor vehicles

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio R Perez whose telephone number is (703) 305-8637. The examiner can normally be reached on Monday - Friday, 7:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Erika Gary can be reached on (703) 308-0123. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JP
6/15/04


ERIKA GARY
PATENT EXAMINER